



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/686,065	10/07/2003	Jeff C. Unger	024.0015	7982
29906	7590	07/12/2005	EXAMINER	
INGRASSIA FISHER & LORENZ, P.C. 7150 E. CAMELBACK, STE. 325 SCOTTSDALE, AZ 85251			VO, HAI	
			ART UNIT	PAPER NUMBER
			1771	

DATE MAILED: 07/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/686,065

Applicant(s)

UNGER ET AL.

Examiner

Hai Vo

Art Unit

1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 19-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10/07/2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-18, drawn to a composite structural material, classified in class 428, subclass 319.3.
- II. Claims 19-21, drawn to a method of making a composite structural material, classified in class 156, subclass various.

The inventions are distinct, each from the other because of the following reasons:

Inventions II and I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the product as claimed can be made by another and materially different process wherein a rib is formed in the interface region.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

During a telephone conversation with Mark Takahashi on 07/06/2005 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-18. Affirmation of this election must be made by applicant in replying to this Office action. Claims 19-21 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 112

Art Unit: 1771

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 6-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 recites the limitation "said first and second layer" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 9 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Wycech (US 6,287,666). Wycech teaches a channel-shaped section comprising a metallic shell 42, a structural foam 48 and a wall 38. The combination of a structural foam and a wall reads on Applicants' non-solid composite section whereas the metallic shell reads on Applicants' solid section. The channel-shaped section has a

Art Unit: 1771

double arch structure formed between the foam and the shell as shown in figure 8.

Accordingly, Wyceh anticipates the claimed subject matter.

6. Claims 1, 4, and 5 are rejected under 35 U.S.C. 102(e) as being anticipated by Gigiakos. Gigiakos teaches a foam wall panel system with a unique Z-shaped stud comprising adjacent foam cores having angled edges being secured into the cavities on opposite sides of Z-shaped studs to form a continuous foam wall (abstract).

Accordingly, Gigiakos anticipates the claimed subject matter.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1, 2 and 4-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sutherland (US 6,723,012) in view of Wyceh (US 6,287,666). Sutherland discloses a baseball bat comprising a non-solid composite section 2 filled with a structural foam, a solid section 4 wherein a wall thickness of the non-solid composite section 2 is greater than a wall thickness of the solid section 4 as shown in figure 3. Sutherland discloses a baseball bat further comprising a transition section 3 coupling the non-solid composite section 2 and the solid section 4. Sutherland teaches the foam made from a polymethacrylimide foam (column 11, lines 35-40). Sutherland discloses the first and second layers made from graphite and epoxy, aluminum and plastic (column 3, lines 10-15, and 59-60). Sutherland does not specifically disclose

Art Unit: 1771

the transition section including at least one curved major surface. Wycech teaches a reinforced channel-shaped member comprising an arch formed at the interface surface of the foam and the shell to support the load and stabilize the walls (column 2, lines 42-45). Likewise, it is clearly apparent that the arch reduces stress on the structural foam layer. It is recognized that Wycech is nonanalogous art, however, it is reasonably pertinent to the particular problem with which the applicant was concerned. Wycech and Applicants are related to the formation of the curved surface at the interface section to reduce the stress. Therefore, It would have been obvious to one having ordinary skill in the art at the time the invention was made to form the curved surface at the interface region where the structural foam is bound to the solid section 4 motivated by the desire to support the load and stabilize the walls and thereby reducing stress.

9. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sutherland (US 6,723,012) in view of Wycech (US 6,287,666) as applied to claim 1 above, further in view of Filice et al (US 6,334,824). Sutherland does not specifically disclose a baseball bat comprising a foam core made from a metallic foam. Filice, however, discloses a baseball bat wherein the foam core can be made from a polymeric foam or a metallic foam (column 4, lines 25-30). The metallic foam and polymeric foam equivalently provide internal support for the thin wall of the baseball bat. Hence, it would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute metallic foam for the polymeric foam since

Art Unit: 1771

two materials have been shown in the art to recognized equivalent foam core for the baseball bats.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Vo whose telephone number is (571) 272-1485. The examiner can normally be reached on M,T,Th, F, 7:00-4:30 and on alternating Wednesdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HV

Hai Vo
HAI VO
PRIMARY EXAMINER